

CLAIMS

What is claimed is:

1. A container assembly for mixing materials comprising:

5 a base having an inner wall defining an upper surface and a mixing chamber for
mixing the materials;

a cover having an outer periphery and being selectively mounted to said base
covering said mixing chamber and being removable from said base exposing said
mixing chamber; and

10 a sealing portion depending from said cover and engaging said upper surface of
said inner wall when said cover is mounted to said base;

15 said sealing portion being at least partially flexible and angled outwardly toward
said outer periphery such that during said engagement of said sealing portion with said
upper surface, said sealing portion flexes and conforms to said upper surface to seal
said mixing chamber for preventing an escape of material from said mixing chamber.

2. An assembly as set forth in claim 1 wherein said sealing portion is spaced
inwardly from said outer periphery.

20 3. An assembly as set forth in claim 2 wherein said sealing portion is angled
outwardly toward said outer periphery from 0.5 to 20 degrees.

4. An assembly as set forth in claim 2 wherein said sealing portion is further defined as an annular wedge having a first end and a distal second end with said first end being mounted to said cover and being thicker than said distal end when viewed in cross section to at least partially provide said flexibility of said sealing portion.

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5. An assembly as set forth in claim 4 wherein said distal second end includes a beveled section to further provide said flexibility of said sealing portion.

6. An assembly as set forth in claim 4 wherein said upper surface of said inner wall includes a chamfer such that said chamfer guides said distal second end of said annular wedge into said mixing chamber as said cover is mounted to said base.

7. An assembly as set forth in claim 2 wherein said sealing portion is integrally formed with said cover.

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8. An assembly as set forth in claim 7 wherein said cover and sealing portion are integrally formed of a polymeric material.

9. An assembly as set forth in claim 2 wherein said base further includes a top surface with said cover being seated upon said top surface when said cover is mounted to said base.

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10. An assembly as set forth in claim 9 wherein said top surface extends substantially transverse to said inner wall and said base further includes an outer ridge extending upwardly from said top surface substantially parallel with said upper surface of said inner wall whereby said ridge surrounds said outer periphery of said cover when
5 said cover is mounted to said base.

11. An assembly as set forth in claim 9 wherein said top surface extends substantially transverse to said inner wall and said cover further includes an outer flange substantially encapsulating said top surface when said cover is mounted to said
10 base.

12. An assembly as set forth in claim 9 wherein said top surface includes at least one aperture for evacuating gases from said mixing chamber.

13. An assembly as set forth in claim 9 further including a seal disposed between said cover and said top surface of said base when said cover is mounted to said
15 base.

14. An assembly as set forth in claim 1 further including a mixing device
20 mountable to said base for mixing the material in said mixing chamber when said cover is removed from said base.

15. An assembly as set forth in claim 1 wherein said base includes a bottom opening and further including a piston disposed within said bottom opening.

16. An assembly as set forth in claim 15 wherein said piston includes an annular ring abutting said bottom opening to seal said mixing chamber and prevent an escape of material from said mixing chamber.

17. An assembly as set forth in claim 9 further including a first locking device disposed on said top surface of said base.

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18. An assembly as set forth in claim 17 further including a second locking device disposed on said outer periphery of said cover wherein said first and second locking devices interlock said cover to said base when said cover is mounted to said base and release said cover from said base as said cover is being removed from said base.

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19. An assembly as set forth in claim 18 further including a lifting mechanism disposed on at least one of said base and cover for automatically lifting said cover relative to said base as said cover is being removed from said base for preventing a discharge of material from said mixing chamber.

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20. An assembly as set forth in claim 19 wherein said first locking device is further defined as a first tab extending substantially parallel to said top surface.

21. An assembly as set forth in claim 20 wherein said second locking device
5 is further defined as a second tab extending from said outer periphery of said cover and frictionally engaging said first tab when said cover is interlocked to said base.

22. An assembly as set forth in claim 21 wherein said lifting mechanism is further defined as an angled step engaging one of said first and second tabs to lift said
10 cover during said removal of said cover from said base.

23. A container assembly for mixing materials comprising:

a base having a top surface and an inner wall with said inner wall defining a mixing chamber for mixing the materials;

a first locking device disposed on said top surface of said base;

5 a cover having an outer periphery and being selectively mounted to said base covering said mixing chamber and being removable from said base exposing said mixing chamber;

a second locking device disposed adjacent said outer periphery of said cover wherein said first and second locking devices interlock said cover to said base when
10 said cover is mounted to said base and release said cover from said base as said cover is being removed from said base; and

a lifting mechanism disposed on at least one of said base and cover for automatically lifting said cover relative to said base as said cover is being removed from said base for preventing a discharge of material from said mixing chamber.
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24. An assembly as set forth in claim 23 wherein said top surface extends substantially transverse to said inner wall with said cover being seated upon said top surface when said cover is mounted to said base.

20 25. An assembly as set forth in claim 24 wherein said first locking device is further defined as a first tab extending substantially parallel to said top surface.

26. An assembly as set forth in claim 25 wherein said second locking device is further defined as a second tab extending from said outer periphery of said cover and frictionally engaging said first tab when said cover is interlocked to said base.

5 27. An assembly as set forth in claim 26 wherein at least one of said first and second tabs include a tapered portion.

10 28. An assembly as set forth in claim 27 wherein said second tab of said cover includes said tapered portion.

15 29. An assembly as set forth in claim 28 wherein said base further includes an outer ridge extending upwardly from said top surface substantially parallel with said inner wall whereby said ridge surrounds said outer periphery of said cover when said cover is mounted to said base.

 30. An assembly as set forth in claim 29 wherein said first tab extends from said ridge toward said inner wall.

20 31. An assembly as set forth in claim 30 wherein said top surface includes an aperture disposed below said first tab for evacuating gases from said mixing chamber.

32. An assembly as set forth in claim 27 wherein said first tab of said base includes said tapered portion.

33. An assembly as set forth in claim 32 wherein said cover further includes
5 an outer flange substantially encapsulating said top surface when said cover is mounted to said base with said flange supporting said second tab.

34. An assembly as set forth in claim 33 wherein said top surface includes an
aperture for evacuating gases from said mixing chamber.
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35. An assembly as set forth in claim 27 further including a stop mechanism disposed on said cover to limit a rotatable movement of said cover relative to said base.

36. An assembly as set forth in claim 35 wherein said stop mechanism is
15 defined as a stop tab extending from said cover whereby said stop tab selectively engages said first tab of said base during a rotation of said cover relative to said base.

37. An assembly as set forth in claim 35 wherein said stop mechanism is defined as an appendage extending from said lift mechanism on said cover whereby said
20 appendage selectively engages said first tab of said base during a rotation of said cover relative to said base.

38. An assembly as set forth in claim 23 wherein said base includes a bottom opening and further including a piston disposed within said bottom opening.

39. An assembly as set forth in claim 38 wherein said piston includes an annular ring abutting said bottom opening to seal said mixing chamber and prevent an escape of material from said mixing chamber.

40. An assembly as set forth in claim 23 wherein said lifting mechanism is further defined as an angled step engaging one of said first and second tabs to lift said cover during said removal of said cover from said base.

41. An assembly as set forth in claim 40 wherein said angled step is mounted to said top surface of said base and engages said second locking device of said cover.

42. An assembly as set forth in claim 40 wherein said angled step is mounted to said cover and engages said first tab of said base.

43. An assembly as set forth in claim 23 further including a seal disposed between said cover and said top surface of said base when said cover is mounted to said base.

44. An assembly as set forth in claim 23 further including a mixing device mountable to said base for mixing the material in said mixing chamber when said cover is removed from said base.

5 45. An assembly as set forth in claim 23 further including a sealing portion depending from said cover and engaging said upper surface of said inner wall when said cover is mounted to said base.

10 46. An assembly as set forth in claim 45 wherein said sealing portion is at least partially flexible and angled outwardly toward said outer periphery such that during said engagement of said sealing portion with said upper surface, said sealing portion flexes and conforms to said upper surface to seal said mixing chamber.

15 47. An assembly as set forth in claim 46 wherein said sealing portion is spaced inwardly from said outer periphery.

20 48. An assembly as set forth in claim 47 wherein said sealing portion is further defined as an annular wedge having a first end and a distal second end with said first end being mounted to said cover and being thicker than said distal end when viewed in cross section to at least partially provide said flexibility of said sealing portion.

49. An assembly as set forth in claim 48 wherein said distal second end includes a beveled section to further provide said flexibility of said sealing portion.

50. An assembly as set forth in claim 49 wherein said upper surface of said
5 inner wall includes a chamfer such that said chamfer guides said distal second end of
said annular wedge into said mixing chamber as said cover is mounted to said base.